

REMARKS

Claims 1-18 are pending in the application. No claims have been amended, added, or canceled in this response. Reconsideration of the present application in view of the following remarks, and a notice of allowance on all pending claims are respectfully requested.

Summary of the Invention

The present invention, as defined by the claims, refers to the use of specific invert soaps that include at least one branched alkyl selected from nonyl, dodecyl, and tridecyl. Applicant has found that these specific invert soaps show a microbicidal effect, as well as a cleansing effect. The microbicidal effect of these compounds is such that they are effective against bacteria, fungi, and viruses and even against spores, all without an additional compound such as imidazoline or 2-bromo-2-nitropropane-1,3-diol. Additionally, these compounds have been found not to foam, which make them especially suitable for application to confined lumina, such as in endoscopes, as now claimed.

Rejection under 35 U.S.C. § 103(a)

Parker in view of Hall

Claims 1-18 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,425,815 to Parker et al. ("Parker") in view of U.S. Patent No. 5,547,990 to Hall ("Hall").

The Office Action states that Parker "teaches a method of cleaning and disinfecting endoscopes wherein the disinfectant used may be a quaternary ammonium compound" (Office Action at 2). The Office Action also states that Hall "evidences the use of quaternary ammonium compounds (such as decylisononyl dimethylammonium chloride) as disinfectants for hard surfaces and discloses that not only do they have 'good (i.e., strong) microbial efficacy' but when combined with the imidozoline amphoteric surfactants, also are less irritating 'without a loss in cleaning ability or microbial efficiency'" (*id.*). Based on these alleged teachings, the Examiner has concluded that "it would have been obvious to one of ordinary skill in the art to employ the quaternary ammonium composition of Hall et al. in the method of Parker et al." (*id.*).

Applicant respectfully submits that the claimed method would not have been obvious to one of ordinary skill in the art viewing any of the cited prior art. Parker discloses a process for cleansing and disinfecting endoscopic medical instruments that includes a first step whereby the instruments are subjected to a cleaning procedure (*see* Parker at col. 1, lines 23-27). This step is *not* described as comprising the use of quaternary ammonium compounds. In the second step described in Parker, the disinfection is typically performed with hyperchlorite (*see id.* at col. 1, lines 27-29; col. 4, lines 26-30). Alternatively, an unspecified quaternary ammonium compound may be used, which is described to be “a less powerful disinfectant” (*id.* at col. 1, lines 50-52).

There is simply no teaching in Parker of using a quaternary ammonium compound as a **cleaning** agent such that the multi-step process taught in that reference might be eliminated. In fact, it is questionable whether Parker even teaches one of skill in the art that a quaternary ammonium compound would be the **disinfectant** of choice since the reference explicitly states that those compounds are “less powerful” disinfectants (*id.*). Furthermore, there is no teaching in Parker of the specific compounds currently claimed and the Examiner has pointed to no suggestion or motivation in Parker to use such compounds. Similarly, Parker also fails to teach that its compounds do not tend to foam. This is especially important in this instance since the failure to foam makes a compound ideally suitable for use in cleaning and disinfecting a surface of confined lumina, as is currently claimed in this application.

Hall fails to remedy the foregoing deficiencies in Parker. Hall discloses a sanitizing and disinfectant solution comprising a quaternary ammonium compound and an amphoteric imidazoline derivative. According to Hall, “the unexpected discovery [is] that the *combination* of (1) certain substituted imidazoline based amphoterics with (2) quaternary ammonium compounds produce concentrates that have reduced ocular irritation, exhibit efficient cleaning and wetting and, most importantly, are biocidally active” (Hall at col. 2, line 63 – col. 3, line 1; emphasis added). There is no teaching in Hall that the specific ammonium compounds are capable of both cleaning *and* disinfecting without the aid of certain substituted imidazoline based amphoterics. In confined lumina, both cleaning and disinfecting may only be performed where foaming is suppressed, which is the case with the currently claimed compounds. There is simply no teaching or suggestion that the compounds

of Hall would be capable of such action and also no teaching or suggestion of using the quaternary ammonium compounds alone.

According to the foregoing teachings, one of ordinary skill in the art would not have found it obvious to employ the quaternary ammonium compounds of Hall with the method of Parker. Hall teaches that it is the *combination* of certain substituted imidazoline based amphoterics *with* quaternary ammonium compounds that produces the improved result. Thus, Hall specifically *teaches away* from the Applicant's claimed invention in that the reference teaches that a combination of quaternary ammonium compounds *plus* imidazoline compounds produces superior microbicidal activity as compared to the quaternary compound alone (*see* Hall at col. 3, lines 1-3). Furthermore, Parker teaches that unspecified quaternary ammonium compounds may be used only for disinfection, but the reference also notes that these compounds are "less powerful" disinfectants. Thus, Parker can also be said to *teach away* from the use of quaternary ammonium compounds as a disinfectant.

Thus, Applicant respectfully submits that the cited art provides no teaching or suggestion of Applicant's claimed method and, in fact, the prior art teaches away from the claimed invention. Accordingly, Applicant respectfully submits that the claims clearly define over Parker and Hall.

O'Connor

Claims 1-5, 7, 8, 10, and 11 have also been rejected under 35 U.S.C. § 103(a) as being unpatentable over O'Connor et al. (Abstract of "Disinfection of gastrointestinal fibrescopes – evaluation of the disinfectants Dettox and Gigasept"). It appears that the rejection is also premised on Hall.

The Office Action states that "O'Connor et al. teaches the use of a quaternary ammonium compound to disinfect fibrescopes. Dettox is a proprietary composition and thus, the exact quaternary compound is unknown." Applicant respectfully disagrees with the statement that "O'Connor et al. teaches the use of a quaternary ammonium compound." Dettox is alleged to be "based on a quaternary ammonium compound." There is no indication of what "based on" exactly means and thus, Applicant submits that it is improper to automatically conclude that a quaternary ammonium compound is necessarily present in the product. Furthermore, even if such a compound is present, there is no indication of what

DOCKET NO.: BKS-0002
Application No.: 09/913,629
Office Action Dated: February 3, 2004

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quaternary ammonium compound it actually is. There is also no teaching in O'Connor et al. that a quaternary ammonium compound would be useful as *both* a disinfecting agent and a cleaning agent. O'Connor et al. only addresses the disinfecting ability of the two commercial compounds, the compositions of which are unknown.

Hall does nothing to remedy the deficiencies of O'Connor et al. As described previously, Hall discloses a sanitizing and disinfectant solution comprising a quaternary ammonium compound and an amphoteric imidazoline derivative. It is this *combination* that gives the desired result and there is no teaching in Hall that the specific ammonium compounds are capable of both cleaning *and* disinfecting without the aid of certain substituted imidazoline based amphoterics. Thus, it would not have been obvious to one of ordinary skill in the art to employ the compounds of Hall in the method of O'Connor et al. as the Office Action alleges and, accordingly, Applicant respectfully requests that this rejection be withdrawn.

For the foregoing reasons, Applicant respectfully requests that the pending rejections under 35 U.S.C. § 103(a) be withdrawn.

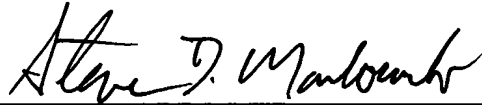
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CONCLUSION

Applicant believes that the foregoing constitutes a complete and full response to the Office Action of record. Applicant respectfully requests allowance of claims 1-18.

Date: May 3, 2004



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